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Indian Standard

SPECIFICATION FOR
TOOLS FOR HANDLING OF ANCHOR
CHAINS AND ATTACHMENTS

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INDIAN STANDARDS INSTITUTION
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

Indian Standard

SPECIFICATION FOR TOOLS FOR HANDLING OF ANCHOR CHAINS AND ATTACHMENTS

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Indian Standard

SPECIFICATION FOR TOOLS FOR HANDLING OF ANCHOR CHAINS AND ATTACHMENTS

0. FOREWORD

0.1 This Indian Standard was adopted by the Indian Standards Institution on 10 December 1970, after the draft finalized by the Shipbuilding Sectional Committee had been approved by the Mechanical Engineering Division Council.

0.2 Ships' anchor cables are governed by the statutory provisions. To handle the anchor chains and attachments, such as Dee-type joining shackle and end shackle, and Kenter type shackle, special tools are necessary and these are generally supplied with the anchor cables.

0.3 This standard covers the requirements of such tools to suit the sizes of anchor chains and attachments covered by IS: 4484-1967* and IS: 4692-1968†.

0.4 For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS: 2-1960‡. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

1. SCOPE

1.1 This standard lays down the specification for the following anchor cable tools:

- a) Pin punch,
- b) Bolt punch, and
- c) Chain hook.

2. TERMINOLOGY

2.0 For the purpose of this standard, the following definition shall apply.

*Specification for electrically welded stud link anchor chains and attachments

†Specification for electrically welded studless link anchor chains and attachments.

‡Rules for rounding off numerical values (*revised*).

2.1 Nominal Size—Nominal size is the actual diameter of the common link in millimetres and is designated by letter 'd'.

3. DESCRIPTION

3.1 Pin punch is an essential tool for removing the taper pin of the Dee-type joining and end shackle and Kenter shackle.

3.2 Bolt punch is a necessary tool for removing the oval shaped pin used with Dee-type joining shackle and end shackle.

3.3 Chain hooks are used for pulling up the anchor chain links and release the load on the attachments prior to their replacement.

4. MATERIAL

4.1 Pin Punch and Bolt Punch—The pin punch and bolt punch shall be made from tool steel of designation T60 according to IS:3749-1966*. The working face of the pin and bolt punch shall have a hardness of 350 to 450 *HV* (vickers hardness), after heat treatment.

4.1.1 The handles for pin punches shall be made of wood according to IS:620-1965†.

4.1.2 The handles for bolt punches shall be made from steel according to IS:2591-1964‡.

4.2 Chain Hook—The bar used for the chain hook shall be in accordance with IS:2591-1964‡.

5. DIMENSIONS

5.1 The dimensions for pin punch shall be as shown in Table 1.

5.2 The dimensions for bolt punch shall be as shown in Table 2.

5.3 The dimensions for chain hook shall be as shown in Table 3.

6. TOLERANCE

6.1 The tolerances on dimensions for pin punch, bolt punch and chain hook shall be as shown in Tables 1, 2 and 3 respectively.

*Specification for tool and die steels for cold work.

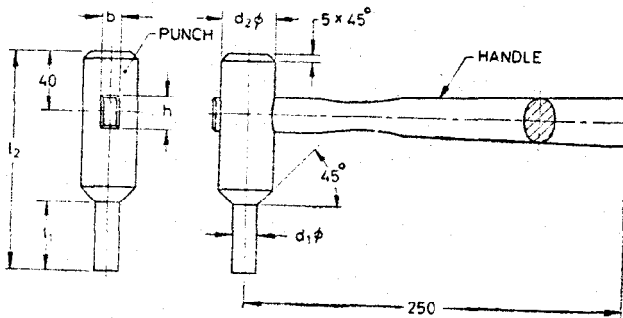
†General requirements for wooden tool handles (*second revision*).

‡Specification for hot rolled bars for threaded components (*first revision*).

TABLE 1 DIMENSIONS FOR PIN PUNCHES

(Clauses 5.1 and 6.1)

All dimensions in millimetres.

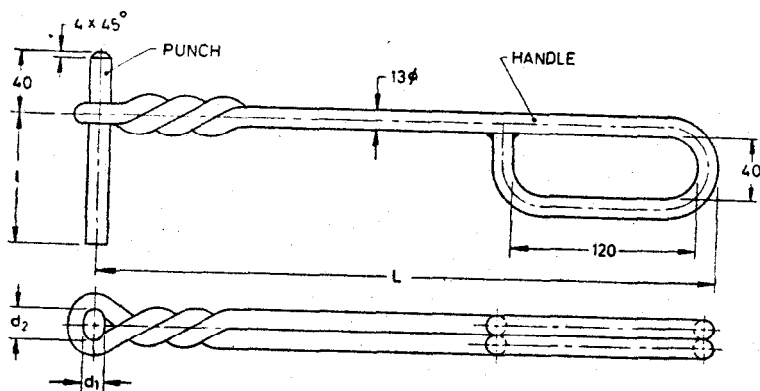


NOM SIZE d	NOM DIA OF ANCHOR CHAIN	d_1		l_1 ± 3	l_2	d_2 $+2$ -0	b $+1$ -0	h ± 1
		Joining Shackle & End Shackle Taper Pins $\pm 1\%$	Kenter Shackle Taper Pin					
21	21 and below	5	5	30	140	32	12	22
23	23 to 29	8	8	30	140	32	12	22
31	31 „ 37	10	10	35	140	32	12	22
40	40 „ 48	16	14	45	145	36	12	22
50	50 „ 63	20	18	55	155	40	14	24
66	66 „ 81	25	22	65	165	45	14	24
83	83 „ 102	32	28	75	175	50	16	26
107	107 and above	40	36	75	175	60	18	28

TABLE 2 DIMENSIONS FOR BOLT PUNCHES

(Clauses 5.2 and 6.1)

All dimensions in millimetres.

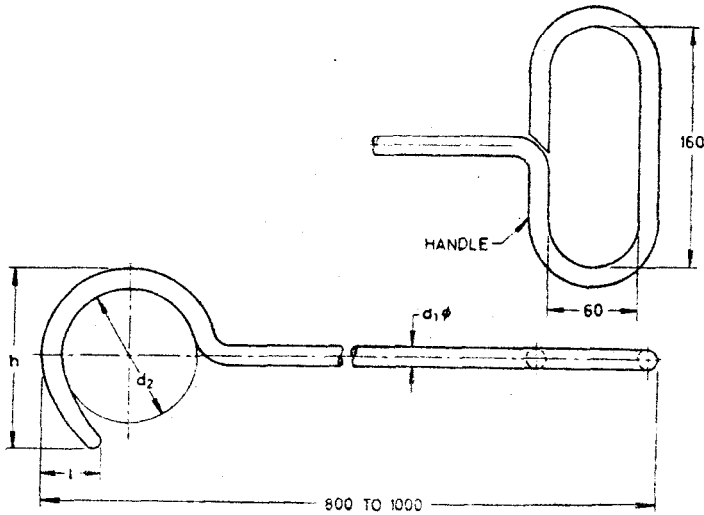


NOM SIZE <i>d</i>	NOM DIA OF ANCHOR CHAIN	d_1 +0 -1	d_2 +0 -2	l +5 -0	L
12.5	12.5 to 16	10	15	65	400
17.0	17 „ 21	14	21	85	400
23	23 „ 29	18	27	120	500
31	31 „ 37	25	38	165	500
40	40 „ 48	32	48	210	500
50	50 „ 63	40	60	260	600
66	66 „ 81	53	80	345	600
83	83 „ 102	66	100	435	700
107	107 and above	86	130	610	700

TABLE 3 DIMENSIONS FOR CHAIN HOOKS

(Clauses 5.3 and 6.1)

All dimensions in millimetres.



NOM SIZE d	NOM DIA OF ANCHOR CHAIN	d_1 ± 1	d_2 ± 3	h ± 3	l ± 2
37	37 and below	13	90	120	40
40	40 to 81	16	110	150	50
83	83 and above	18	150	190	70

7. DESIGNATION

7.1 Tools for handling of anchor chains and attachments shall be designated by the title, nominal size and the number of the standard.

Example :

Bolt punch of nominal size 40 shall be designated as :

Bolt Punch 40 IS : 5859.

8. MARKING

8.1 The tools shall be marked with the manufacturer's identification mark and the nominal size.

8.1.1 The tools may also be marked with the ISI Certification Mark.

NOTE — The use of the ISI Certification Mark is governed by the provisions of the Indian Standards Institution (Certification Marks) Act, and the Rules and Regulations made thereunder. Presence of this mark on products covered by an Indian Standard conveys the assurance that they have been produced to comply with the requirements of that standard, under a well-defined system of inspection, testing and quality control during production. This system, which is devised and supervised by ISI and operated by the producer, has the further safeguard that the products as actually marketed are continuously checked by ISI for conformity to the standard. Details of conditions, under which a licence for the use of the ISI Certification Mark may be granted to manufacturers or processors, may be obtained from the Indian Standards Institution.

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